

FSBEI HE NOGMA of the Ministry of Health of Russia  
Department of Human Anatomy with topographic anatomy and operative surgery  
Discipline "ANATOMY"  
Specialty 31.05.01 - General Medicine  
(educational program, partially implemented in English)

<i>N<sup>o</sup> n/n</i>	<i>Name of the section</i>	<i>Themes for independent work</i>
1	Introduction	<ol style="list-style-type: none"> <li>1. History of Russian anatomy.</li> <li>2. The concept of organs and systems of human organs. The position of man in nature.</li> <li>3. The meaning of the anatomical terms of the International Anatomical Nomenclature (in Latin and Russian), their use in medical education at theoretical and clinical departments.</li> </ol>
2	Locomotor apparatus	<ol style="list-style-type: none"> <li>1. Chemical composition, physical and mechanical properties of bone. Periosteum.</li> <li>2. Features of the structure of bones in childhood, adolescence, mature, elderly and senile age.</li> <li>3. The influence of labor and sports on the structure of bones</li> <li>4. Forms of rib and sternum variability, anomalies of their development.</li> <li>5. Phylogeny and ontogeny of the skull.</li> <li>6. Sexual and typical features of the skull structure, developmental anomalies.</li> <li>7. Criticism of racist theories in the teaching of the skull.</li> <li>8. Bones of the extremities. Brief data on phylogeny and ontogeny of limb bones.</li> <li>9. X-ray anatomical data on the structure and timing of ossification of the skeleton of the girdle and free upper limb.</li> <li>10. X-ray anatomical data on the structure and timing of ossification of the skeleton of the girdle and free lower limb.</li> <li>11. Similarities and differences in the structure of the skeleton of the upper and lower extremities in connection with their functions.</li> <li>12. Specific features in the structure of the bones of the upper and lower extremities in humans, acquired in the process of anthropogenesis.</li> <li>13. Development of compounds (phylogeny and ontogeny).</li> <li>14. The structure of the joint. Types of movements in the joints and their elementary analysis (axes of rotation, planes of motion).</li> <li>15. The spinal column as a whole (curves, age and sex characteristics). X-ray anatomy of the spinal column.</li> <li>16. Shapes of the chest. Chest X-ray. Anomalies in the structure of the chest.</li> <li>17. Specific features of the structure and function of the spinal column and chest in humans in connection with upright posture.</li> <li>18. P.F. Lesgaft on the effect of function on the structure of muscles and bones.</li> <li>19. The doctrine of the center of gravity of the human body Analysis of the basic positions and movements of the human body (standing, walking, running, jumping) Distinctive features of the structure of the human motor apparatus, acquired in connection with upright posture.</li> </ol>
3	Splanchnology	<ol style="list-style-type: none"> <li>1. Phylogenesis and ontogeny of the digestive system.</li> <li>2. Anomalies in the development of the face and oral cavity - "cleft lip", "cleft palate", etc.</li> <li>3. Development and structure of teeth.</li> <li>4. X-ray anatomy of teeth.</li> <li>5. The role of language in articulate speech.</li> <li>6. X-ray anatomy of the colon. The shape and position of various parts of the large intestine in a living person; anatomical and physiological sphincters of the colon.</li> <li>7. Phylogenesis and ontogeny of the respiratory organs.</li> <li>8. Mechanisms of voice formation. Establishing and straining apparatus of the larynx.</li> <li>9. Laryngoscopic pictures and X-ray anatomy of the larynx.</li> <li>10. Phylogenesis and ontogeny of urinary organs and genitals.</li> <li>11. X-ray anatomy of the kidney and urinary tract.</li> <li>12. Malformations of the organs of the urinary system.</li> <li>13. Development of external and internal genital organs.</li> <li>14. Homology of male and female genital organs, anomalies of their development (hermaphroditism).</li> <li>15. Perineum: pelvic diaphragm, urogenital diaphragm in men and women.</li> </ol>
4	Organs of the immune system and lymph drainage pathways	<ol style="list-style-type: none"> <li>1. General patterns of structure. Primary and secondary organs of the immune system.</li> <li>2. Development of the lymphatic system, its connection with the venous bed.</li> <li>3. Individual and age-related features of the anatomy of large lymphatic vessels and lymph nodes.</li> <li>4. Factors providing the movement of lymph.</li> <li>5. Ways of outflow of lymph from the pelvic organs and abdominal cavity.</li> <li>6. Ways of lymph outflow from the lungs, heart, esophagus, breast.</li> <li>7. Lymphatic vessels of the head and neck organs.</li> <li>8. X-ray anatomy of the lymphatic system.</li> </ol>
5	Endocrine glands.	<ol style="list-style-type: none"> <li>1. Classification of endocrine glands by origin, especially anatomy and topography.</li> <li>2. The pituitary gland, its topography, structure (adeno- and neurohypophysis), functions.</li> <li>3. Pineal gland (pineal gland), topography, structure, function.</li> <li>4. Parathyroid glands, topography, structure, function.</li> </ol>

6	The cardiovascular system	<ol style="list-style-type: none"> <li>1. X-ray anatomy of the heart and large vessels.</li> <li>2. The most important anastomoses between the branches of the subclavian, axillary, brachial and other arteries of the upper limb.</li> <li>3. Anastomoses between the branches of the abdominal part of the aorta.</li> <li>4. Anastomoses between the branches of the femoral, anterior and posterior tibial and other arteries of the lower extremity.</li> <li>5. Variants of branching and branching of the arteries of the human body. Places of pressing the arteries to the bones to stop bleeding and determine the pulse.</li> <li>6. Regularities of the formation of veins. Anatomical devices that ensure the movement of blood through the veins to the heart.</li> <li>7. Anastomoses between the supplies of the superior and inferior vena cava - cava-caval anastomoses.</li> <li>8. Anastomoses of the portal vein with supplies of the superior and inferior vena cava: porto-caval anastomoses.</li> </ol>
7	Neurology.	<ol style="list-style-type: none"> <li>1. Functional characteristics of the nervous system in the light of the physiological teachings of IP Pavlov and PK Anokhin (functional systems).</li> <li>2. The leading role of the nervous system in the body, its importance for the function of organs, in uniting parts of the body into a single whole and in establishing links between the body and the external environment.</li> <li>3. Projection of the cranial nerve nuclei onto the surface of the rhomboid fossa. Vascular base of the fourth ventricle.</li> <li>4. Reticular formation The main features of its structure.</li> <li>5. Olfactory brain</li> <li>6. Communication of the cranial nerves with the autonomic nervous system. Nerves containing fibers of the parasympathetic part of the autonomic nervous system.</li> <li>7. Intermediate nerve, knee node. The relationship between the intermediate nerve and the facial nerve.</li> <li>8. Regularities of innervation of certain muscle groups and areas of the skin of the upper limb. Topographic and anatomical relationships of the nerves and blood vessels of the upper limb.</li> <li>9. Regularities of the structure and function of the autonomic nervous system.</li> </ol>
8	Esthesiology	<ol style="list-style-type: none"> <li>1. Peripheral-perceiving, conductive parts and cortical centers of the analyzers, their functional unity (IP Pavlov).</li> <li>2. Lacrimal apparatus: lacrimal gland, lacrimal canaliculus, lacrimal sac, nasolacrimal duct.</li> <li>3. The mechanism of perception and ways of conducting sound. Pathways of the organs of hearing and balance.</li> </ol>

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